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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/604,285	06/26/2000	Vincent James Gatto	PM 268477	5162

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WASHINGTON, DC 20006-1201

EXAMINER

MEDLEY, MARGARET B

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 10/16/2002

16

Please find below and/or attached an Office communication concerning this application or proceeding.

TC-16

Office Action Summary

Application No.

09/604,285

Applicant(s)

GATTO ET AL.

Examiner

Margaret B. Medley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-40, 42-52, 56 and 57 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 22-40, 42-52, 56 and 57 is/are allowed.
- 6) ☒ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. In view of applicants' arguments presented at the 24 September 2002 interview that applicants claims do not contain new matter and that applicants should be allowed claims based on the molybdenum content being greater than the about 100 to 450 ppm, and the secondary diarylamine content being greater than the at least about 750 to 5,00 ppm that was allowed in the parent applications of 09/359,770, now US Patent RE 37,363, E and 08/ 559,879 now US Patent 5,650,381 wherein the said molybdenum compound is selected from the group consisting of a sulfur and phosphorus free organic amide molybdenum complex and a molybdenum carboxylate wherein the carboxylate anion has from about 4 to 30 carbon atoms.

The amendment to claim 30, the cancellation of claims 53-55 and the addition of the newly added claims 56 and 57 presented in Paper No. 15 dated September 27, 2002 have been entered of record.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 22-39 and 42-52 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 and 16-19 of U.S. Patent No. 5,650,381. Although the conflicting claims are not identical, they are not patentably distinct from each other because the method for improving the antioxidancy and friction properties of a lubricant and a lubricating composition comprising a molybdenum compound containing molybdenum and the same diarylamine compounds of the instant claims render obvious the method of for improving antioxidancy and friction properties of a lubricant and a lubricating composition comprising a molybdenum compound containing molybdenum and a diarylamine compound of patentees.

Claims 22-39, 42-52 and 56-57 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7, 16-19 and 22 of U.S. Patent No. RE 037,363 E. Although the conflicting claims are not identical, they are not patentably distinct from each other because the method for improving the antioxidancy and friction properties of a lubricant and a lubricating composition comprising a molybdenum compound containing molybdenum and the same diarylamine compounds, a method for lubricating an engine comprising said lubricating composition and an engine lubricated with said composition of the instant claims render obvious the method of for improving antioxidancy and friction properties of a lubricant and a lubricating composition comprising a molybdenum compound containing

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molybdenum and a diarylamine compound, a method for lubricating an engine comprising said composition and an engine lubricated with said of patentees.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 22-40 and 42-52 and 56-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thorsell et al 4,648,985 combined with Applicants' Admission in view of Louis de Vries et al 4,394,279.

Applicants claim a method for improving the antioxidant and friction properties of a lubricant comprising adding to the lubricant a molybdenum compound and an oil soluble secondary diarylamine (claim 52); a method for lubricating a crankcase or transmission comprising lubricating a crankcase or transmission with a lubricating composition (claim 56) according to claims 22 or 23; a lubricated engine obtained

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according to claim 56 (claim 57); and lubricant compositions comprising a lubricating oil, a molybdenum compound, and a secondary diarylamine and further comprising conventional additives in the lubricating oil composition (claims 22-40, , 42-51).

Thorsell et al teach and discloses a there component system lubricant composition comprising a dithiocarbamate, a zinc phosphate compound when zinc is the selected "W" and a molybdenum carboxylate when molybdenum is the selected "Z" and when the carboxylate is the selected compound with the further inclusion of conventional additives e.g. an amine oxidant, note column 4 lines 27 to column 5 lines 1-29 and 54 to column 6 lines 1-11 and column 9, lines 30-39. The Thorsell et al further disclose an amine oxidation inhibitor in its lubricant composition, note column 9, lines 33-34.

Patentees further disclose the use of its lubricant composition in enclosed and open gear lubricant system, bearing greases and cam lubricants, note column 11, lines 46 to 51 and column 8, lines 60 to column 9, lines 1-23, which encompass the method for lubricating a crankcase or transmission and lubricated crankcase or transmission of instant claims 56 and 57.

Thorsell et al further disclose process steps for adding to a lubricant oil a molybdenum compound and an amine which is reasonable expected to improve the antioxidancy property and friction property of the lubricating, note column 8, lines 60-65 and column 9, lines 30-34.

Applicants make admission on record at column 1, line 42 to column 3 lines 1 to 38 of the instant application that the prior art teaches well-known molybdenum compounds and aromatic mines that have been used in lubricant compositions. It is noted that the Price 3,285,942, column 1, lines 51-53 and Hunt et al 4,832,857, column 1, lines 60-63 disclosed as prior art by applicants are the same patent containing

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molybdenum compounds at column 3, lines 60 to column 4, lines 1-45, that are substantially free of phosphorus and active sulfur are used as the molybdenum compounds by applicants in the instant claims.

Applicants further teaches the artisan in the art that

By “substantially free” they mean that the molybdenum compound contains less than 0.5 % (50000ppm) by weight of the material in question, e.g. active sulfur which is generally an insufficient amount to add significantly to corrosion. The sulfur content of some commercially available molybdenum compounds can often have as much as about 1,000 ppm of sulfur as a contaminant and occasionally there can be as much as 2,000 ppm of the active sulfur. Such small amounts often come from contamination in processing the various ingredients involved, see column 3, lines 37-46 of the instant application.

The teachings of Thorsell for the three components system, e.g. of Table II of column 9 comprising a dithiocarbamate, with molybdenum octoate (ethylhexanoate) as the metallic octoate component, along with the zinc dithiophosphate being the selected the additional component that is required by the instant claims along with an amine antioxidants rendered the instant claims obvious because the amine of Thorsell is so broad that it would encompass the secondary diarylamine of applicants. The composition of Thorsell comprising 1.0-5.0 % by weight carbamate containing sulfur certainly falls within the guidelines substantially free of sulfur definition made of record by applicants. The zinc dithiophosphate additive lower limits of 1.0 % by weight certainly falls within the guideline of substantially free of phosphorus definition made of record by applicants.

. Applicants' make admission on record that the prior art teaches various molybdenum compounds that are commercially available and have been conventionally used in lubricating oil compositions, column 1, line 42 to column 2, lines 1-38. The admitted prior art Price et al US Patent 3,285,942 teach glycol molybdate complexes of instant claim 40. The admitted prior art Hunt et al US 4,832,857 teach overbased molybdenum alkaline earth metal and alkali metal dispersions. Richie et al WO 95/07962 teaches various molybdenum compounds including molybdenum carboxylates, overbased molybdenum-containing complexes, molybdenum compounds dithiocarbamates and molybdenum dithiophosphates, molybdenum xanthanates and thioxanthates with secondary amines, see page 8, lines 6-29. The admitted prior art provides the motivation to one of ordinary skill in the art to substitute the admitted prior art well-known molybdenum compounds for the molybdenum compounds of Thorsell and to selected secondary amines as the amine antioxidant of Thorsell with reasonable expectation of improving the antioxidancy and friction properties of lubricating oil compositions.

Applicants' instant claim compositions, methods for improving the antioxidant and friction properties, method for lubricating a crankcase or transmission and lubricated crankcase or transmission are specific to a secondary diarylamine antioxidant and of a specific structure (claims 45-50) and of specific relative proportion of the diarylamine wherein the prior art is silent to said specifics. It is the Examiner's position that the inclusion of an amine of a secondary diarylamine structure in relative proportion of about 750 to 5,000 ppm in the lubricant oil composition would be obvious in view of Louis de Vries et al.

The secondary reference, Louis de Vries et al, discloses 0.05 to 15 % by weight (500-150,000 ppm) sulfur free containing molybdenum complexes in combination with

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0.02 to 10 parts by wt. of an aromatic amine in a lubricant (abstract, col. 1 line 53 to col. 2 lines 1-3, and col. 5, lines 1-19) and provides for the preparation of concentrates of the combination of additives within a carrier liquid to provide a convenient method of handling and transporting the additives (col. 8, lines 35-42).

It would have been obvious to the person having ordinary skill in the art at the time of the instant claimed invention to use the secondary amine compounds of Richie and Louis de Vries et al as the amine in Thorsell et al lubricant, concentrate, methods and lubricated engine to arrive at a lubricant having improved antioxidant and friction properties and a molybdenum compound which is substantially free of phosphorus and substantially free of active sulfur because combining two or more materials disclosed by the prior art for the same purpose to form a third material that is to be used for the same purpose has been held to be a prima facie case of obviousness, See *In re Kerkhoven*, 205 USPQ 1069. The ratios for the molybdenum compound to the diarylamine compound can be determined by routine experimentation as disclosed by Richie, see pages 17-18 and Ex. 7 and Thorsell et al, see column 9, lines 24-26.

It would have been obvious to one of ordinary skill in the art with the teachings of the Admitted prior art of Richie, Price et al and Hunt et al. to select the molybdenum compound that is phosphorus and sulfur free as the molybdenum compounds of Thorsell to arrive at a lubricant having improved antioxidant and friction properties.

Claims 22-40, 42-52 and 56-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art.

Applicants make admission on record at column 2, lines 13-27 that prior art Richie et al (Richie) WO95/07962 teaches crankcase lubricant composition for use with engines comprising copper, molybdenum and aromatic amines.

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The instant claims are rendered obvious by Richie teachings directed to a lubricating composition for use in automobile or truck engine, see page 3, lines 17-20 and page 5, lines 24-28, comprising a lubricating oil, a copper additive; not more than 500, and preferably 100, ppm of molybdenum see page 4, lines 11-15 and page 7, lines 32-37, of an oil soluble form e.g. molybdenum carboxylate, see page 8, lines 10-29; and from 0.05 to 2 mass % of at least one oil soluble di(alkylaryl)amine, see page 4, lines 17-21 and page 9, line 26 to page 10, line 14, and further provides for the inclusion of at least one or more conventional lubricant additive including zinc dithiophosphate, see page 4, lines 22-32. Richie teaches a lubricating composition comprising a dialkylated amine in combination with molybdenum compound and zinc dithiophosphate see pages 17 and 18, for Table 1, example 7 for 40 ppm of molybdenum from molybdenum 2-ethylhexanoate, 0.3 mass % (3000 ppm) di(nonylphenyl)amine. Thus the instant claims are rendered obvious by the teachings of Richie because there is nothing new about the combination of an oil soluble molybdenum compound with a secondary dialkylated aryl amine and in further combination with conventional lubricant additives.

Applicants are notified that any subsequent amendment to the specification and/or claims must comply with 37 CFR 1.121(b).

Claims 22-40, 42-52 and 56-57 are rejected under 35 U.S.C. 251 as being based upon new matter added to the patent for which reissue is sought. The added material, which is not supported by the prior related patents or instant application is as follows:

In claim 22 (and its dependent claims) and claim 56 and claim 57, **wherein the ratio of said oil soluble molybdenum compound relative to said oil soluble secondary diarylamine is about 0.02 to 0.6 parts by weight molybdenum per part**

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of said secondary diarylamine, and said oil soluble secondary diarylamine is present in an amount of at least about 750 to 5,000 ppm of said lubricating composition is considered as new matter. The newly added limitation to claim 22 is in conflict with the originally filed specification and claims of US Patent RE 037,363 E and US Patent 5,650,381 in that the instant specification at the fourth full paragraph, lines 47-56 of column 6 reads as follows:

Preferably, the quantity of molybdenum in relation to the quantity of the secondary amine should be within a certain ratio. The quantity of molybdenum should be about 0.020 to 0.6 parts by weight for each part by weight of the amine in the lubricating oil composition. Preferably, this ratio will be from about 0.040 to 0.40 parts of the molybdenum per part of the amine and particularly about 0.05 to 0.3 parts of the molybdenum per part of the amine. The total quantity of the molybdenum and amine can be provided by one or more than one molybdenum or amine compound.

The above paragraph is in conflict with applicants alleged support for the newly added limitation to claim 22 (and its dependent claims) and claim 56 and claim 57 for the ratio of molybdenum with the specific amount of about 750 to 5,000 ppm of secondary diarylamine.

In the instant specification under the section titled SUMMARY OF THE INVENTION the third paragraph reads as follows:

In still another aspect, the invention is directed to a lubrication oil concentrate comprising a solvent and a combination of from about 2.5 to 90 percent by weight of an oil soluble molybdenum compound which is substantially free of active sulfur and an oil soluble secondary diarylamine wherein the weight ratio of molybdenum from the molybdenum compound

to the diarylamine in the concentrate is from about 0.020 to 0.60 parts molybdenum for each part of amine.

The above paragraph is directed to a concentrate wherein the instant claims are directed to a lubricating composition. Further the above paragraph is in conflict with applicants alleged support for the newly added limitation to claim 22 (and its dependent claims) and claim 56 and claim 57 for the ratio of molybdenum with the specific amount of about 750 to 5,000 ppm secondary diarylamine.

In claim 23 (and its dependent claims) and claim 56 and claim 57, **wherein the ratio of said oil soluble molybdenum compound relative to said oil soluble secondary diarylamine is about 0.02 to 0.6 parts by weight molybdenum per part of said secondary diarylamine, and said oil soluble molybdenum compound is present in an amount of at least about 100 to 450 ppm of said lubricating composition** is considered as new matter. The newly added limitation to claim 23 is in conflict with the originally filed specification and claims of US Patent RE 037,363 E and US Patent 5,650,381 in that the instant specification at the fourth full paragraph, lines 47-56 of column 6 reads as follows:

Preferably, the quantity of molybdenum in relation to the quantity of the secondary amine should be within a certain ratio. The quantity of molybdenum should be about 0.020 to 0.6 parts by weight for each part by weight of the amine in the lubricating oil composition. Preferably, this ratio will be from about 0.040 to 0.40 parts of the molybdenum per part of the amine and particularly about 0.05 to 0.3 parts of the molybdenum per part of the amine. The total quantity of the molybdenum and amine can be provided by one or more than one molybdenum or amine compound.

The above paragraph is in conflict with applicants alleged support for the newly added limitation to claim 23 (and its dependent claims) and claim 56 and claim 57 for the ratio of molybdenum with the specific amount of about 750 to 5,000 ppm of secondary diarylamine.

In the instant specification under the section titled SUMMARY OF THE INVENTION the third paragraph reads as follows:

In still another aspect, the invention is directed to a lubrication oil concentrate comprising a solvent and a combination of from about 2.5 to 90 percent by weight of an oil soluble molybdenum compound which is substantially free of active sulfur and an oil soluble secondary diarylamine wherein the weight ratio of molybdenum from the molybdenum compound to the diarylamine in the concentrate is from about 0.020 to 0.60 parts molybdenum for each part of amine.

The above paragraph is directed to a concentrate wherein the instant claims are directed to a lubricating composition. Further the above paragraph is in conflict with applicants alleged support for the newly added limitation to claim 23 (and its dependent claims) and claim 56 and claim 57 for the ratio of molybdenum with the specific amount of about 100 to 450 ppm molybdenum compound.

Applicant's arguments filed September 27, 2002 have been fully considered but they are not persuasive.

Applicants argue that their description of their invention cannot constitute a prior art "**admission**".

The examiner agrees with applicants' argument. The prior art made of record at column 1, lines 49 to column 2, lines 1-39 of the instant application by applicants is

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admitted prior art. It is also further noted that applicants have also incorporated the prior art admission of Price et al 3,285,942 and Hunt et al 4,832,857 at column 3, line 60 to column 4, lines 1-46 of the instant application as part of their instant claimed invention. But since applicants have made admission on record that the Price 3,285,942 and Hunt et al 4,832,857 are prior art, the examiner will maintain the references as admitted prior art teaching references. Thus applicants' argument is deemed moot.

The references cited and made of record in the letter Patent 5,650,381 and RE 37,363 E and by the examiner have been reviewed and reconsidered.

The prior art cited but not applied further teach lubricant oil compositions comprising additives of the same nature as claimed by Applicants.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret B. Medley whose telephone number is 703-308-2518. The examiner can normally be reached on Mon-Fri.

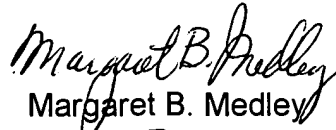
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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A handwritten signature in black ink, reading "Margaret B. Medley". The signature is written in a cursive style with a large, stylized "M" and "B".

Margaret B. Medley
Primary Examiner
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Margaret B. Medley
October 13, 2002